

### **REMARKS/ARGUMENTS**

The undersigned attorney appreciates the Examiners willingness to discuss proposed claim amendments during the course of a telephone interview on March 15, 2010. In accordance with the discussions during the interview, Applicant has amended the claims to add means plus function language in accordance with 35 U.S.C. Section 122, paragraph 6.

Claims 1, 2, 4-12, and 14-21 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Howorth U.S. Patent 4,531,956 in view of Marsh et al. U.S. Patent 3,629,999. By the present Amendment, independent claims 1, 12 and 14 have been amended, in accordance with 35 U.S.C. Section 122, paragraph 6, to recite that the claimed arrangement includes "means for giving rise to a continuously replenished rising layer of filtered air over the work surface and forming a robust blanket of sterile air over the work surface".

The Examiner indicates on page 20 of the Office Action that one of the features on which the Applicant previously relied (i.e. laminar flow from the boundary walls) was not recited in the claims. The independent claims have now been amended to specifically recite a significant distinguishing feature over the Howorth '956 and Marsh '999 citations, namely *means for* giving rise to a "continuously replenished rising layer of filtered air over the work surface, forming a robust blanket of sterile air over the work surface". The amendment to the independent claims has direct support from the patent specification. The recitation that the arrangement gives rise to a rising layer of air, forming a robust blanket over the work surface clarifies that the air flowing upwards from the work surface comprises layers of air that are parallel with the work surface. Laminar flow is the term given to fluid flow when the fluid flows in parallel layers, with no disruption between the layers. The independent claims describe laminar flow, but using different terminology, that was used in the patent application as filed.

The invention as recited in the independent claims is not obvious in light of Howorth '956 and Marsh '999. Neither Howorth '956 nor Marsh '999 disclose apparatus that are adapted to provide a continuously replenished rising layer of filtered air over the work surface, forming a robust blanket of sterile air over the work surface.

The trolley of Howorth '956 has air outlets directed vertically *upwardly* from the work surface, whereas the trolley described by the claims only has air outlets directed inwardly of the boundary wall. The air directed upwardly from the vertically directed outlets in Howorth '956 would be disrupted by the instruments placed on the work surface, and would not give rise to a robust blanket of sterile air over the work surface, as recited by the claims and described in the specification.

The trolley of Marsh '999 is adapted to provide a vertically rising vortex of air from the air outlets, Col. 2, lines 65-69 (i.e. a turbulent flow of air). The turbulent flow of air from Marsh '999 cannot be described as a "continuously replenished rising layer of air", as recited by the independent claims.

In the present invention, the continuously replenished rising layer of air prevents entrainment of blood from surgical instruments in the rising airflow as an aerosol, as the sterile air directed inwardly from the side walls rises, rather than being directed downwards towards the work surface. In contrast, the apparatus of Marsh '999 is adapted to create a rising vortex of air (i.e. a turbulent flow of air), which means that some of the air may be directed back down, towards the surface, and may entrain blood from surgical instruments in the airflow before it is deflected upwards again. Furthermore, in Marsh '999, the rising vortex of air is likely to entrain contaminants from outside the sterile zone into the vortex of air, causing the contaminants to enter the sterile zone and to contaminate the surgical instruments on the work surface (as the turbulent air will be directed to flow in all directions, including some air being directed downwards).

In the apparatus of the invention, the continuously replenished rising layer of air forms a robust blanket of air over the work surface, preventing inflow of contaminants into the sterile zone (see page 3, lines 9-13). This functional distinction provides great advantage not previously available in the art. The claims as amended recite not only this functional distinction in terms of means plus function language, but also recite a distinguishing structural combination resulting in this advantageous feature. Neither the distinct functional advantage, nor the distinct structural combination, are shown in, suggested by, or rendered obvious in light the cited references.

For at least these reasons, Applicants submit that the invention as now claimed clearly defines patentable subject matter in light of Howorth '956 and Marsh '999.

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Reply to Office Action of November 20, 2010

Applicants respectfully and earnestly request withdrawal of the rejection and passage of the application to allowance.

Respectfully submitted,

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A handwritten signature in black ink, appearing to read "Ed Williams", is written over the printed name of the attorney.

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